

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars:

Priority

The examiner's acknowledgement of Applicant's claim for foreign priority is noted with appreciation. However, the examiner states that a certified copy of the priority documents has not been filed as required by 35 U.S.C. 119(b). Submitted herewith is a copy of the filing receipt card for the present application, indicating that a certified copy of the Korean application 47051 was submitted with the present application. Applicant notes, however, that the filing receipt card appears to misidentify the certified copy as "Korean application no. 47051, filed August 14, 2001", instead of Korean application no. 2000-47051, filed August 14, 2000. The typographical error in the filing date identified for the Korean application on the receipt card is apparent, in view of the August 13, 2001 filing date of the present application.

The Examiner is respectfully requested to acknowledge the receipt of the certified copy of the priority document, as evidenced by the filing receipt card, in the next Official Action.

Claim objections

Claim 1 presently stands objected to because of informalities. In particular, the examiner notes that a reference, in claim 1, to "the filtered modulated RF signal" should be changed to "the filtered modulated RF signal from the first filtering means." Claim 1 has been amended according to the examiner's suggestion. Accordingly, withdrawal of the objection is respectfully requested.

Rejection of claims 1-3 and 6 under 35 U.S.C. § 103(a)

Claims 1-3 and 6 presently stand rejected as being unpatentable over admitted prior art (APA) in view of Dubberly et al (U.S. 5,581,555). Applicant notes that the first

sentence of paragraph 2 of the Office Action states that “claim 1, 3, 5, and 6 are rejected” in view of APA and Dubberly. However it appears from the subsequent discussion of this rejection that it is claims 1-3 and 6 that are so rejected.

This rejection is respectfully traversed for the following reasons. Claim 1 has been amended to more clearly define the claimed subject matter.

The present invention, as defined in amended claim 1, is directed to a system for providing a multiple internet connection by employing a filter which selectively filters a transmission frequency on upstream data, in an HFC cable network system. The system includes cable modems, filters, CMTSs, and multiple ISP host servers and subscribers. Since each subscriber uses a specific frequency band in data upstream by using the filters, each subscriber can be easily connected to a correct ISP server.

Therefore, a problem of interference between a plurality of cable modems, which is a problem of the prior art, has been solved. Further, more than one ISP can provide an internet connection for subscribers using the same HFC cable network to thereby reduce infrastructure cost. Since there is no additional cost for building an infrastructure, it is especially more effective in a sparsely populated area like a rural community.

It is respectfully submitted that APA, in combination with Dubberly, fails to teach or suggest all the claim limitations set forth in claim 1 of the present invention. Moreover, it is respectfully submitted that there is no motivation or suggestion to lead one skilled in the art to combine the teachings of Dubberly with APA to arrive at the presently claimed invention.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP 2143). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be

found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). All claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

It is respectfully submitted that a *prima facie* case of obviousness of claim 1 cannot be established by APA and the teachings of Dubberly.

The Examiner has stated that it would have been obvious to a person of ordinary skill in the art, to modify the admitted prior art system, using the filtering means of Dubberly for the purpose of sharing and splitting the limited upstream bandwidth.

However, a diplex filter 430 in Fig. 12 of Dubberly which is indicated as a first filtering means by the Examiner is connected to an output of a combiner coupled to all of reverse channel modulators 415a...415n in Fig. 12 in order to pass a signal in the 5-30 MHz reverse channel. Further, it passes signals in the selected forward 15.840 MHz spectrum for downstream signals to the forward channel modulator 420. Clearly, the diplex filter 430 does not split the reverse band from about 5-30 MHz in contrast with the present invention in order to remove an interference with each subscriber.

Claim 1 requires a first filtering means, *connected to the first cable modem (CM)*, for selectively filtering the modulated RF signal *from the first CM*. Dubberly fails to disclose or suggest a filter connected to the first CM. Dubberly shows only the diplex filter connected to a splitter that is between the diplex filter and a coaxial cable drop. Further, Dubberly lacks any teaching or suggestion that the cable drop is or may be connected to a cable modem.

Regarding a second filtering means, Dubberly discloses a diplex filter 325 that passes signals outward within the 15.840 MHz frequency forward spectrum. The frequency of the output of the diplex filter 325 is centered at an appropriate location along the spectrum allocated for forward or downstream *telephony signals*. It has nothing to do with the second filtering means in the present invention for passing the filtered modulated RF signal from the first filtering means.

Claim 1 sets forth a second filtering means, connected to the transmission means, for filtering the modulated RF signal transmitted through the transmission means to thereby pass the *filtered modulated RF signal* from the *first filtering means*. Thus, there is clearly a relationship between the first and second filtering means. Additionally, claim 1 sets forth a first cable modem termination system (CMTS) *connected to* the second filtering means.

It must be noted that, as with the first filtering means, the duplex filter 325 is connected between a splitter 340 and the broadband communications network, but is not connected to a CMTS. Therefore, Dubberly cannot disclose or suggest a second filtering means that is connected to transmission means *and* connected to the CMTS.

Therefore, the combination of APA and Dubberly does not teach nor suggest all the limitations set forth in claim 1 describing a system splitting a frequency band used in upstream for a multi internet connection in a cable network system. Further, Dubberly does not contain the necessary motivation or some suggestion to modify the admitted prior art to arrive at the claimed invention.

It is respectfully submitted that, for at least these reasons, claim 1, and therefore also the dependent claims 2-6, are allowable over the cited references. Accordingly, withdrawal of the rejection is respectfully requested.

Rejection of claims 4 and 5 under 35 U.S.C. § 103(a)

Claims 4 and 5 presently stand rejected as being unpatentable over APA in view of Dubberly, and further in view of Kitoh et al (U.S. 5,493,261). This rejection is respectfully traversed as follows.

As discussed above, APA and Dubberly fail to teach or suggest all the claim limitations of claim 1, and therefore fail to establish a prima facie case of obviousness of claim 1. Kitoh discloses a dielectric filter using a quarter wavelength coaxial dielectric resonator, but does not mention a system splitting a frequency band used in upstream for providing a multi internet connection in a cable network system. In fact, Kitoh does not disclose or suggest any use of the dielectric filter in an internet or network environment or

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in conjunction with a cable modem or any other components set forth in claim 1 of the present application. Therefore, it is respectfully submitted that KitoH fails to supplement the deficiencies of the teachings of ADA and Dubberly discussed above.

It is therefore respectfully submitted that claims 4 and 5 are allowable over the cited references, and the withdrawal of this rejection is respectfully requested.

Conclusion

In view of the amendments to the claims, and in further view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is requested that claims 1-6 be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the Applicant's attorney, the Examiner is invited to contact the undersigned at the numbers shown.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "John R. Schaefer", written in a cursive style.

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